AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:

identifying at least one presentation object to be included in a print job;

recognizing each combination of presentation parameters associated with each appearance of the at least one presentation object within the print job;

rasterizing the at least one presentation object according to each recognized combination of presentation parameters to create a rasterized object for each such combination;

caching each rasterized object in a local storage; ~~and~~

utilizing the appropriate rasterized object from storage when printing a portion of the print job requiring inclusion of the at least one presentation object;

saving an original version of each at least one presentation object in the local storage;

selecting at least one category of blocked errors to be ignored during printing; and

if an unblocked error occurs during the rasterization of the at least one presentation object, aborting the rasterization whereby the presentation object will be rasterized during printing and the unblocked error reported.

2. (Previously Presented) The method of claim 1 wherein the step of caching comprises associating each rasterized object with an object label and at least one presentation parameter identifier whereby the appropriate rasterized object may be identified.

3 - 4 (Cancelled)

5. (Previously Presented) The method of claim 1 wherein the combination of presentation parameters used to rasterize the at least one presentation object comprises a subset of the presentation parameters needed for inclusion of the object in the print job; and

wherein the step of utilizing comprises modifying the rasterized object to conform with at least one additional presentation parameter prior to including the rasterized object in the print job; and

further comprising storing the modified rasterized object in the local storage with a modified presentation parameter identifier including the at least one additional presentation parameter.

6. (Currently Amended) The method of claim 5 1 where the at least one additional presentation parameter comprises at least one of trimming-on-the-fly and rotation.

7. (Currently Amended) A method comprising:

identifying at least one presentation object to be included in a print job;

recognizing each combination of presentation parameters associated with each appearance of the at least one presentation object within the print job;

for each said combination, creating a preRIP command identifying the at least one presentation object and the associated presentation parameters, wherein said preRiP command directs a printer to rasterize the identified presentation object according to the identified combination of parameters and to cache the rasterized object for later printing; and

sending each said preRiP command to a printer;

sending blocked error information to the printer to indicate at least one type of error to be ignored during the rasterization process; and

if an unblocked error occurs during the rasterization of the at least one presentation object, aborting the rasterization whereby the presentation object will be rasterized during printing and the unblocked error reported.

8. (Cancelled)

9. (Previously Presented) The method of claim 7 wherein the combination of presentation parameters identified in the preRIP command comprises a subset of the presentation parameters needed for inclusion of the object in the print job.

10. (Withdrawn) A method comprising:

receiving at a printer at least one preRiP command identifying a presentation object to be included in a print job and presentation parameters associated with the object; and

in response to the at least one preRIP command, rasterizing the presentation object according to the presentation parameters and storing the rasterized object in a cache accessible to the printer.

11. (Withdrawn) The method of claim 10 further comprising storing an original, un-rasterized version of each presentation object in the cache.

12. (Withdrawn) The method of claim 11 further comprising associating with each stored rasterized object an object label identifying the presentation object and a parameter label identifying the parameters used in rasterizing the object.

13. (Withdrawn) The method of claim 12 further comprising:

receiving at a printer print data specifying at least one presentation object and associated presentation parameters for inclusion in a print job; and in response to said print data,

searching the cache for the rasterized object with the object label and the parameter label matching the object and parameters specified by the print data;

if a matching rasterized object is found; including said rasterized object in a printed output of the print data; and if no matching rasterized object is found, rasterizing the object according to the specified parameters and including the result in the printed output of the print data.

14. (Withdrawn) The method of claim 13 wherein at least one additional presentation parameter must be applied to the matching rasterized object prior to inclusion in the printed output and wherein the method further comprises:

modifying the matching rasterized object to conform with the at least one additional parameter and including the modified matching rasterized object in the printer output; and

storing the modified matching rasterized object in the cache with a modified parameter label identifying a complete parameter list associated with the modified matching rasterized object.

15. (Withdrawn) The method of claim 14 wherein the at least one additional presentation parameter comprises at least one of trimming-on-the-fly and rotation.

16. (Withdrawn) The method of claim 10 further comprising:

receiving at a printer blocked error information identifying at least one type of error that may be ignored during the rasterization process; and

wherein if an unblocked error occurs during the rasterization of the presentation object, aborting the rasterization and storing the original, unrasterized object in the cache for rasterization at a print time.

17. (Currently Amended) A computer-readable storage media having embodied thereon computer program instructions effective when executing on a print server to:

identify at least one presentation object to be included in a print job;

recognize each combination of presentation parameters associated with each appearance of the at least one presentation object within the print job;

for each said combination, create a preRIP command identifying the at least one presentation object and the associated presentation parameters, wherein said preRIP command directs a printer to rasterize the identified presentation object according to the identified combination of parameters and to cache the rasterized object for later printing; and

send each said preRIP command to the printer,

wherein the computer program instructions are effective when executing on a print server to send blocked error information to the printer to indicate at least one type of error to be ignored during the rasterization process, and if an unblocked error occurs during the rasterization of the at least one presentation object, to abort the rasterization whereby the presentation object will be rasterized during printing and the unblocked error reported.

18. (Cancelled)

19. (Previously Presented) The media of claim 17 wherein the combination of presentation parameters identified in the preRIP command comprises a subset of the presentation parameters needed for inclusion of the object in the print job.

20. (Withdrawn) A computer-readable storage media having embodied thereon computer program instructions effective when executing on a printer to:

receive at least one preRIP command identifying a presentation object to be included in a print job and presentation parameters associated with the object; and

in response to the at least one preRIP command, rasterize the presentation object according to the presentation parameters and store the rasterized object in a cache accessible to the printer.

21. (Withdrawn) The media of claim 20 further comprising computer program instructions effective when executing on a printer to store an original, un-rasterized version of each presentation object in the cache.

22. (Withdrawn) The media of claim 21 further comprising computer program instructions effective when executing on a printer to associate with each stored rasterized object an object label identifying the presentation object and a parameter label identifying the parameters used in rasterizing the object.

23. (Withdrawn) The media of claim 22 further comprising computer program instructions effective when executing on a printer to:

receive print data specifying at least one presentation object and associated presentation parameters for inclusion in a print job;

in response to said print data, search the cache for the rasterized object with the object label and the parameter label matching the object and parameters specified by the print data; and

if a matching rasterized object is found, include said rasterized object in a printed output of the print data; and

if no matching rasterized object is found, rasterize the object according to the specified parameters and include the result in the printed output of the print data.

24. (Withdrawn) The media of claim 23 wherein at least one additional presentation parameter must be applied to the matching rasterized object prior to inclusion in the printed output and wherein the media further comprises computer program instructions effective when executing on a printer to:

modify the matching rasterized object to conform with the at least one additional parameter and include the modified matching rasterized object in the printer output; and

store the modified matching rasterized object in the cache with a modified parameter label identifying a complete parameter list associated with the modified matching rasterized object.

25. (Withdrawn) The media of claim 24 wherein the at least one additional presentation parameter comprises at least one of trimming-on-the-fly and rotation.

26. (Withdrawn) The media of claim 20 further comprising computer program instructions effective when executing on a printer to:

receive blocked error information identifying at least one type of error that may be ignored during the rasterization process; and

wherein if an unblocked error occurs during the rasterization of the presentation object, the rasterization is aborted and the original, unrasterized object is stored in the cache for rasterization at a print time.

27. (Withdrawn) An apparatus comprising:

a print job pre-processing module for identifying presentation objects in a print job to be pre-processed and at least one combination of presentation parameters associated therewith;

a pre-rasterization module for rasterizing each presentation object according to the at least one combination of presentation parameters to create a pre-rasterized object;

an identification module for associating with each pre-rasterized object an object label identifying the object and a parameter label identifying the parameters used in pre-rasterizing the object;

a local cache for holding information accessibly to the apparatus; and

a caching module for storing the pre-rasterized object and the associated object label and parameter label in the local cache.

28. (Withdrawn) The apparatus of claim 27 wherein the caching module further stores the original, un-rasterized version of each presentation object in the local cache.

29. (Withdrawn) The apparatus of claim 28 further comprising:

a print job processing module for identifying the object label and parameter label associated with at least one presentation object to be included in a print job;

a cache searching module for searching the local cache for the matching pre-rasterized object with the object label and the parameter label matching the object label and the parameter label of the at least one presentation object to be included; and

a printing module for including the matching pre-rasterized object in a printed output of the print job.

30. (Withdrawn) The apparatus of claim 28 further comprising:

a blocked error module for identifying at least one type of blocked error that may be ignored during the pre-rasterization; and

a print-time rasterization module for rasterizing presentation objects at print time; and wherein, if the pre-rasterization module encounters an unblocked error during pre-rasterization the pre-rasterization is aborted and the object is rasterized by the print-time rasterization module at print time.

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31. (Withdrawn) The apparatus of claim 30 wherein the at least one combination of parameters associated with a presentation object comprises a subset of the presentation parameters needed for inclusion of the object in the print job; and

wherein the cache searching module searches for the pre-rasterized object with the object label matching the object label of the presentation object to be included and the parameter label most closely matching the presentation parameters of the presentation object to be included; and

wherein the print-time rasterization module modifies the pre-rasterized object to conform with at least one additional presentation parameter prior to inclusion by the printing module.

32. (Withdrawn) A print server comprising:

at least one application program for creating print jobs including presentation objects having presentation parameters defining the formatting applicable thereto;

a print job processing module for: recognizing the presentation objects and each combination of presentation parameters associated with each appearance of each presentation object within the current print job; and

for each said combination, creating a preRIP command identifying the presentation object and the associated presentation parameters, wherein said preRIP command directs a printer to rasterize the identified presentation object according to the identified combination of parameters and to cache the rasterized object for later printing; and

a communication module for communicating with an attached printer to send each said preRIP command to the printer.

33. (Withdrawn) The print server of claim 32 wherein said communication module further sends blocked error information to the printer indicating at least one type of error that may be ignored during the rasterization process.

34. (Withdrawn) The print server of claim 32 wherein the combination of presentation parameters identified in the preRIP command comprises a subset of the presentation parameters needed for inclusion of the object in the print job.

35. (Withdrawn) A printer comprising:

a communication module for receiving at least one preRIP command identifying a presentation object to be included in a print job and presentation parameters associated with the object;

a cache storage accessible to the printer;

a rasterization module for, in response to the at least one preRIP command, rasterizing the presentation object according to the presentation parameters; and

a storage module for storing the rasterized object and the original, un-rasterized version of the object in the cache.

36. (Withdrawn) The printer of claim 35 wherein the storage module further associates with each stored rasterized object an object label identifying the presentation object and a parameter label identifying the parameters used in rasterizing the object.

37. (Withdrawn) The printer of claim 36 wherein the communication module further receives print data specifying at least one presentation object and associated presentation parameters for inclusion in a print job; and

wherein the printer further comprises:

a cache searching module for, in response to said print data, searching the cache for the matching rasterized object with the object label and the parameter label matching the object label and the parameter label of the at least one presentation object to be included; and

a printing module for, if a matching rasterized object is found, including the matching rasterized object in a printed output of the print job and, if no matching rasterized object is found, rasterizing the object according to the specified parameters and including the result in the printed output of the print data.

38. (Withdrawn) The printer of claim 37 wherein at least one additional presentation parameter must be applied to the matching rasterized object prior to inclusion in the printed output and wherein the printing module further:

modifies the matching rasterized object to conform with the at least one additional parameter and includes the modified matching rasterized object in the printed output; and

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wherein the storage module further stores the modified matching rasterized object in the cache with a modified parameter label identifying a complete parameter list associated with the modified matching rasterized object.

39. (Withdrawn) The printer of claim 38 wherein the at least one additional presentation parameter comprises at least one of trimming-on-the-fly and rotation.

40. (Withdrawn) The printer of claim 35 wherein the communication module further receives blocked error information identifying at least one type of error that may be ignored during the rasterization process; and

wherein, if the rasterization module detects an unblocked error during the rasterization of the presentation object, the rasterization is aborted.

41. (New) A method comprising:

identifying at least one presentation object to be included in a print job;

recognizing each combination of presentation parameters associated with each appearance of the at least one presentation object within the print job;

rasterizing the at least one presentation object according to each recognized combination of presentation parameters to create a rasterized object for each such combination;

caching each rasterized object in a local storage; and

utilizing the appropriate rasterized object from storage when printing a portion of the print job requiring inclusion of the at least one presentation object,

wherein the combination of presentation parameters used to rasterize the at least one presentation object comprises a subset of the presentation parameters needed for inclusion of the object in the print job,

wherein the step of utilizing comprises modifying the rasterized object to conform with at least one additional presentation parameter prior to including the rasterized object in the print job, and

wherein the method further comprises storing the modified rasterized object in the local storage with a modified presentation parameter identifier including the at least one additional presentation parameter.